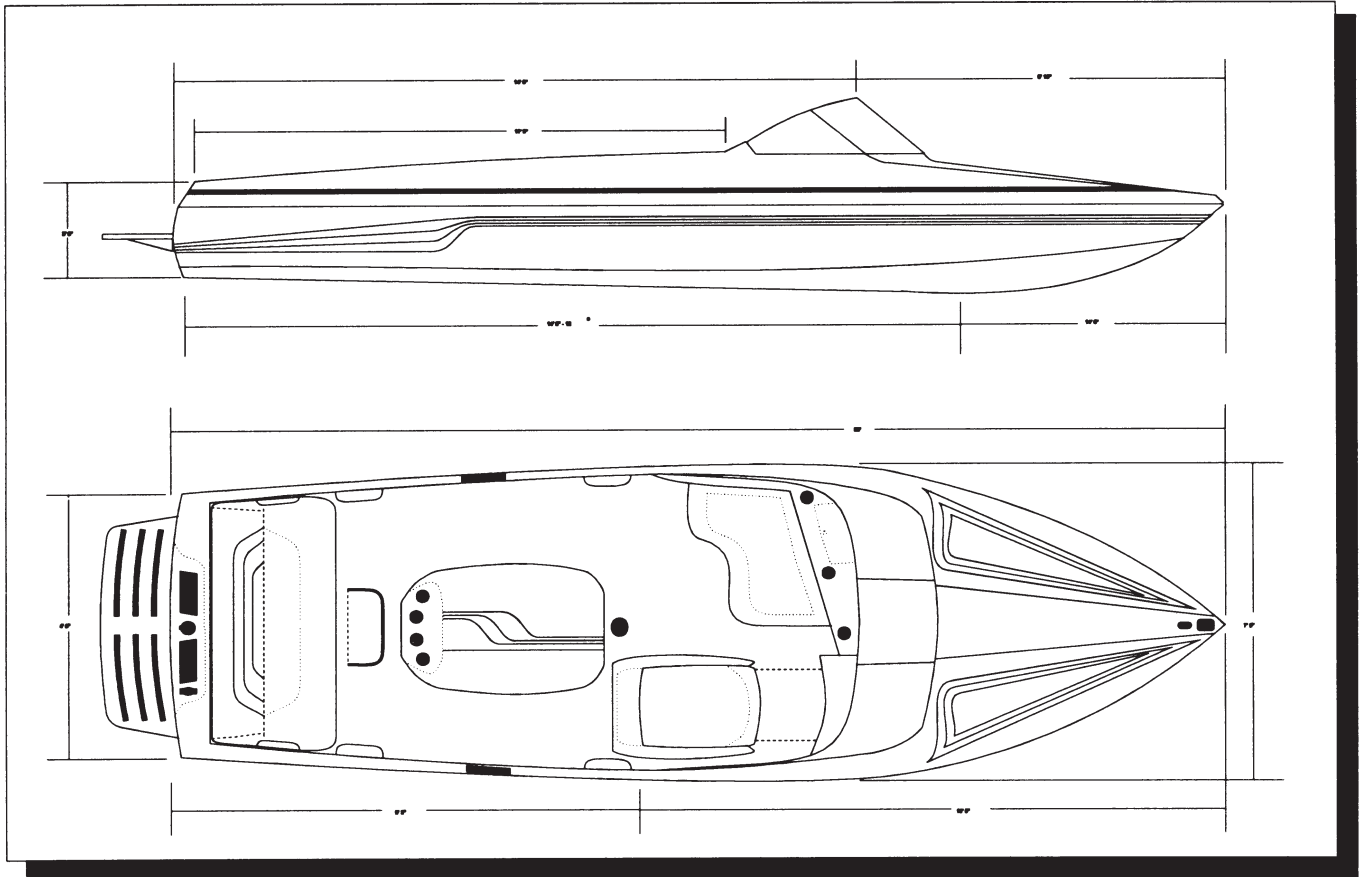


Malibu® Boats

Pulling Ahead



OPERATION & MAINTENANCE MANUAL

1993 – 1996 MODELS

Manufacturers of Malibu and Flightcraft Boats



1995 & 1996 Operation & Maintenance Manual

First Edition
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I. GENERAL INFORMATION

Over the years, you have watched us grow into one of the most respected boat builders in the world. And undoubtedly, somewhere you have ran into at least one Malibu owner that proudly speaks of the “Malibu Difference”. That difference they so proudly speak of could be the special way we have serviced them over the years. We call it “going the distance”. Or maybe they are referring to the way their Malibu consistently outperforms other ski boats that they have driven. We can’t deny that we are different. Our passion for building the perfect ski boat is only surpassed by our commitment to total customer satisfaction.

We, at Malibu Boats, thank you for choosing us as your boat manufacturer and assure you that your satisfaction and boating enjoyment will continue to be our #1 priority.

Safety

Safety is not an option with Malibu Boats and that is why our Research and Development Center spends countless hours in the development of safer and more comfortable features for skiers and their families.

Even though your Malibu boat has been constructed to meet all U.S. Coast Guard and National Marine Manufacturers Association (N.M.M.A.) requirements, it is still your responsibility as the boat owner to ensure that the boat is operated in a safe fashion.

U.S. Coast Guard regulations require that certain safety equipment be present on your boat during operation. Besides the U.S. Coast Guard regulations, other local and/or international law enforcement agencies may have similar requirements. You should check with your local marine enforcement agency regarding any such requirements before using the waterways.

It is not intended for this manual to be a replacement for a course on boating safety. It is highly recommended that if you are un-familiar with the use and operation of a boat, you seek advice and training from a qualified individual or organization. Check with your local Malibu dealer for more information on boating safety classes in your area.

Specifications

Echelon

The award winning Malibu Echelon is a uniquely crafted ski boat that seamlessly combines a high level of performance with an equally high level of luxury and comfort. The Echelon features many powerful engine choices. Like the standard Mercruiser 260 Ski package or the more potent 350 Magnum EFI or the breathtaking 454 Magnum EFI. Arguably, they are the most powerful and reliable powerplants in the industry. In addition to all this power, the 1995 Echelon features a newly designed interior. One meticulously crafted for durability and comfort. And one graced with an extraordinary array of functional features like locking bow storage. A large self-draining ice chest, driver’s lumbar support, tilt wheel and full length sun deck are just a few of the standard ammenities found on this luxury ski machine.

Overall Length:	19’ 6”	Beam:	86”
Weight	2,350lbs.	Engine:	Mercruiser 5.7L Comp Skier
Top Speed:	45.5MPH	Fuel Capacity:	32 Gallons
Engine Mounting:	FibECS	Stringers:	Composite

Echelon (1996)

The award winning Malibu Echelon is a uniquely crafted ski boat that seamlessly combines a high level of performance with an equally high level of luxury and comfort. The Echelon features many powerful engine choices. Like the standard Mercruiser 265 Ski package or the more potent 350 Magnum EFI. Arguably, they are the most powerful and reliable powerplants in the industry. In addition to all this power, the 1996 Echelon features a newly designed interior. One meticulously crafted for durability and comfort. And one graced with an extraordinary array of functional features like locking bow storage. A large self-draining ice chest, and tilt wheel are just a few of the standard amenities found on this luxury ski machine.

Overall Length:	20'	Beam:	90"
Weight	2,500lbs.	Engine:	Mercruiser 350 Magnum H.O.
Top Speed:	45MPH	Fuel Capacity:	38 Gallons
Engine Mounting:	FibECS II	Stringers:	Composite

Echelon LX

The Echelon LX combines an exceptionally smooth ride with tournament level skiing performance. In fact, this "open-bow" received better marks from Waterski Magazine's test crew than the majority of the closed-bow boats. The Echelon's low noise level and even lower vibration makes for an extremely comfortable ride. Effortless steering, good visibility, and the new Computron ATD leave the driver nothing to complain about.

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Response

Lively, sleek, and highly engineered, the Malibu Response establishes an entirely new standard in it's class. A proven hull design. Beautifully integrated gelcoat graphics. And a roomier, finely crafted interior. The Response's value is determined not by what you pay, but what you get.

Overall Length:	20'	Beam:	90"
Weight	2,450 Lbs.	Engine:	Mercruiser 5.7L Comp Skier
Top Speed:	46 MPH	Fuel Capacity:	38Gallons
Engine Mounting:	FibECS	Stringers:	Composite

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Weight	2,450 Lbs.	Engine:	MerCruiser 350 Magnum H.O.
Top Speed:	46 MPH	Fuel Capacity:	38Gallons
Engine Mounting:	FibECS II	Stringers:	Composite

ResponseLX

All the features of the Response but available as an open bow model. The Response LX incorporates the quickness and agility of the response but adds the flexibility of an open bow for those who want the best of both worlds.

Sunsetter

Malibu Sunsetter ultimately defines the true family ski boat. Great skiability, smooth ride, enormous storage. Those families that demand maximum versatility can still enjoy the pleasure of spirited performance with the Malibu Sunsetter.

Overall Length:	21'	Beam:	93"
Weight	2,850Lbs.	Engine:	MerCruiser 5.7L Comp Skier
Top Speed:	45 MPH	Fuel Capacity:	32 Gallons
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Top Speed:	45 MPH	Fuel Capacity:	38 Gallons
Engine Mounting:	FibECS II	Stringers:	Composite

Sunsetter VLX

The new Malibu Sunsetter V-Drive: safety, comfort, enormous capacity, and pure enjoyment are some of the thoughts that come to mind when you see and drive this boat. Patterned after the Sunsetter LX, the VLX is Malibu's first ever V-Drive Ski Boat. Incorporating boundless seating and relaxation areas, large sun deck, and plenty of gear storage make this the boat of choice for pure skiing and leisure satisfaction.

Overall Length:	21'	Beam:	93"
Weight	2,850Lbs.	Engine:	MerCruiser 350 Magnum H.O.
Top Speed:	45 MPH	Fuel Capacity:	38 Gallons
Engine Mounting:	FibECS II	Stringers:	Composite

Tantrum

The Tantrum, designed for those who want more boat for their money. Featuring a full sized boat (20'), and powered by Mercruiser's Magnum 265, giving you all the performance for your buck. This boat was built to take everything you have to give. Complete with single axle trailer, this boat was built with a wealth of performance and a modest price to fit most budgets too.

Overall Length:	20'	Beam:	85"
Weight	2,100 Lbs.	Engine:	Mercruiser 350 Magnum H.O.
Top Speed:	46 MPH	Fuel Capacity:	27 Gallons
Engine Mounting:	FibECS	Stringers:	Composite

Flightcraft Sportster

After Malibu's engineers spent much of their innovative energy in the development of the Echelon...they took a breath...just one. Then it was back to work...and what a piece of work it is...the Flightcraft Sportster.

Performance has never been a hindering factor in the consumer's purchasing decision. Interior space and seating have kept the Flightcraft from taking over as the ultimate three-event training boat...enter the 6 inches of beam and the three person observer seat and the Flightcraft leaves nothing to complain about. Unless you don't like hot performance, luxurious interior, lack of spray and Malibu's reputation for high quality.

Overall Length:	20'	Beam:	86"
Weight	2,300 Lbs.	Engine:	Mercury 5.7L Comp Skier
Top Speed:	47.5 MPH	Fuel Capacity:	32 Gallons
Engine Mounting:	FibECS	Stringers:	Composite

Flightcraft Barefooter

The Flightcraft Barefooter was designed by engineers whose ceaseless commitment to interior ergonomics and comfort are only overshadowed by their commitment to safety. From the well-planned and appointed dash and large stern ski locker to the numerous interior safety handles, the Flightcraft emits human engineering. And like all Malibu boats, we are extremely confident about the quality and high levels of craftsmanship that goes into the building of each and every Flightcraft. That's why we provide every Flightcraft owner with a Lifetime Limited Warranty, valid for as long as you own your boat.

Overall Length:	20'	Beam:	86"
Weight	1,900 Lbs.	Engine:	Mercury 200 XRI
Top Speed:	62 MPH	Fuel Capacity:	32 Gallons
Engine Mounting:	FibECS	Stringers:	Composite

Flightcraft Barefooter (1996)

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Overall Length:	20'	Beam:	86"
Weight	1,900 Lbs.	Engine:	Mercury 200 XRI
Top Speed:	60 MPH	Fuel Capacity:	32 Gallons
Engine Mounting:	Transom	Stringers:	Composite

II. FEATURES & OPTIONS

You're not likely to find another boat company that assimilates as many innovative features into their boats as Malibu. We're not sure why, but it probably has to do with "tradition" and a certain inflexible thinking about "how things should be done." Some boat makers, even those claiming over 50 years of experience, feel there's safety in doing the expected. Even fairly new arrivals in the industry don't deviate much from rigid boundaries. At Malibu, we operate under a different set of rules. Actually, there are only three rules. Build the best. Be at the leading edge. And pour all your passion into it. Apparently, it works. Malibu recently accepted 1994 Product Excellence Awards for Outstanding Workmanship and Best Innovations and in 1995 received Competition Ski Boat of the year award. It's amazing what a boat company can accomplish when it refuses to follow the same old traditions.

Features

DESCRIPTION	TAN	SUN (95)	SUN (96)	SVLX	ELX (95)	ELX (96)	ECH (95)	ECH (96)	RES (95)	RES (96)	FCS	FCB (95)	FCB (96)
Mer cruiser 350 C.I. 260 Ski Package – 250 H.P.	N/A	S	N/A	N/A	S	N/A	S	N/A	S	N/A	S	N/A	N/A
Mer cruiser 350 C.I. Magnum H.O. - 265 H.P.	S	S	S	S	S	S	S	S	S	S	O	N/A	N/A
Mer cruiser 350 C.I. Magnum EFI H.O. - 265 H.P.	O	O	O	O	O	O	O	O	O	O	O	N/A	N/A
EFI Mer cruiser 454 C.I. Magnum H.O. – 395 H.P.	N/A	O	N/A	N/A	O	N/A	O	N/A	N/A	N/A	N/A	N/A	N/A
EFI Mercury 200 XRI Outboard - 200 H.P.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	S
1:1 Gear Ratio Transmission	S	S	S	S	S	S	S	S	S	S	S	N/A	N/A
10-Segment Stopwatch	N/A	N/A	N/A	N/A	S	S	S	S	N/A	N/A	N/A	N/A	N/A
12-Volt DC Power Outlet	S	S	S	S	S	S	S	S	S	S	S	S	S
4-Color Gelcoat	N/A	S	S	S	N/A	N/A	N/A	N/A	S	S	N/A	N/A	N/A
5-Color Gelcoat	N/A	O	O	O	S	S	S	S	O	O	S	S	S
Adjustable Driver's Seat	S	S	S	S	S	S	S	S	S	S	S	S	S
Air Water Temp Indicator	N/A	N/A	N/A	N/A	S	S	S	S	N/A	N/A	N/A	N/A	N/A
"All Fiberglass Hull, Deck, Stringers, and Floor Liner"	S	S	S	S	S	S	S	S	S	S	S	S	S
All Stainless Steel Hardware	S	S	S	S	S	S	S	S	S	S	S	S	S
Analog Clock	O	O	O	O	N/A	N/A	N/A	N/A	O	O	N/A	O	O
Automatic Bilge Pump System	S	S	S	S	S	S	S	S	S	S	S	S	S
Automatic Blower Operation	N/A	N/A	N/A	N/A	S	S	S	S	N/A	N/A	S	N/A	N/A
Barefoot Comp Package 2-Swivel Buckets & Aft Speedo	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	O	O

DESCRIPTION	TAN	SUN (95)	SUN (96)	SVLX	ELX (95)	ELX (96)	ECH (95)	ECH (96)	RES (95)	RES (96)	FCS	FCB (95)	FCB (96)
Bimini Top	O	O	O	O	O	O	O	O	O	O	O	O	O
Bow Lifting Eye	N/A	O	O	O	O	O	O	O	O	O	O	O	O
Bow Storage	S	N/A	N/A	N/A	N/A	N/A	S	S	S	S	S	S	S
Boat Cover	O	O	O	O	O	O	O	O	O	O	O	O	O
Carpeted Motor Box Base	S	S	S	N/A	S	S	S	S	S	S	S	N/A	N/A
Center Floor Ski Locker	N/A	S	S	S	S	S	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Circuit Breakers	S	S	S	S	S	S	S	S	S	S	S	S	S
Chrome Gas Cap & Vent	N/A	N/A	S	S	N/A	S	N/A	S	N/A	S	N/A	N/A	N/A
Coaming Pads	S	S	S	S	S	S	S	S	S	S	S	S	S
Computron ATD (Advanced Technology Dash)	N/A	N/A	N/A	N/A	S	S	S	S	N/A	N/A	N/A	N/A	N/A
Convex Rear View Mirror	S	S	S	S	S	S	S	S	S	S	S	S	S
Digital Clock	N/A	N/A	N/A	N/A	S	S	S	S	N/A	N/A	N/A	N/A	N/A
Digital Speedometer	N/A	N/A	N/A	N/A	S	S	S	S	N/A	N/A	N/A	N/A	N/A
Depth Meter/Alarm	O	O	O	O	S	S	S	S	O	O	O	O	O
Digital Tachometer	N/A	N/A	N/A	N/A	S	S	S	S	N/A	N/A	N/A	N/A	N/A
Driver's Air Lumbar Support	N/A	S	S	S	S	S	S	S	S	S	S	S	S
Dual Airguide Speedometers	O	S	S	S	S	S	S	S	S	S	S	S	S
FibECS II (Patented Fiberglass Engine Chassis System)	¹ S	¹ S	S	N/A	¹ S	S	¹ S	S	¹ S	S	¹ S	N/A	N/A
Gas Motor Box Lifts	S	S	S	² S	S	S	S	S	N/A	N/A	S	N/A	N/A
Graphic Speed Analyzer	N/A	N/A	N/A	N/A	S	S	S	S	N/A	N/A	N/A	N/A	N/A
Heater (2 or 3 Outlet)	N/A	O	O	O	O	O	O	O	O	O	O	N/A	N/A
Heavy-duty 22 oz. Syntec Marine Carpeting	16 oz	S	S	S	S	S	S	S	S	S	S	S	S
Deluxe 40 oz. Syntec Marine Carpet	N/A	N/A	O	O	N/A	O	N/A	O	N/A	O	N/A	N/A	O
Heavy-duty Transom Tie Down Rings	S	S	S	S	S	S	S	S	S	S	S	S	S
Horn	S	S	S	S	S	S	S	S	S	S	S	S	S
Hot Water Shower	N/A	N/A	O	O	O	O	O	O	O	O	N/A	N/A	N/A
Deluxe Hot Water Shower	N/A	N/A	N/A	N/A	O	O	O	O	N/A	N/A	N/A	N/A	N/A
Power Steering	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	O	O
Hydro-Phonic Dampening System	N/A	N/A	S	N/A	N/A	S	N/A	S	N/A	S	N/A	N/A	N/A

¹ Original Patented FibECS

² Electronic Hydraulic Hatch Lift

Features

DESCRIPTION	TAN	SUN (95)	SUN (96)	SVLX	ELX (95)	ELX (96)	ECH (95)	ECH (96)	RES (95)	RES (96)	FCS	FCB (95)	FCB (96)
Indirect Storage Lighting	S	S	S	S	S	S	S	S	S	S	S	S	S
Integrated Gelcoat Graphics	N/A	S	S	S	S	S	S	S	S	S	S	S	S
Lighted Bow Storage	S	N/A	N/A	N/A	N/A	N/A	S	S	S	S	S	S	S
Lighted Gunnel Storage	S	S	S	S	S	S	S	S	S	S	S	S	S
Lockable Glove Box	N/A	S	S	S	S	S	S	S	S	S	S	S	S
Lockett Timing System	N/A	N/A	N/A	N/A	S	N/A	S	N/A	N/A	N/A	N/A	N/A	N/A
MEMS (Malibu Electronic Management System)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	N/A	N/A
Mercuriser Audio Alarm Warning System	S	S	S	S	S	S	S	S	S	S	S	N/A	N/A
Molded-In Fiberglass Ice Chest	N/A	S	S	S	S	S	S	S	S	S	S	S	S
Map Pockets	N/A	S	N/A	N/A	S	N/A	S	N/A	S	N/A	S	S	N/A
Netted Storage	S	N/A	S	S	N/A	S	N/A	S	N/A	S	N/A	N/A	S
Observer's Seat (Aft Facing)	S	S	S	S	S	S	S	S	S	S	S	S	S
Lockable Bow Storage	N/A	N/A	N/A	N/A	N/A	N/A	S	S	N/A	N/A	N/A	N/A	N/A
Oversized Cup Holders	S	S	S	S	S	S	S	S	S	S	S	S	S
Padded Motor Box With Stainless Steel Hinges	S	S	S	S	S	S	S	S	S	S	S	N/A	N/A
Polyethylene Fuel Tank	S	S	S	S	S	S	S	S	S	S	S	S	S
Patented Swivel Head Pylon	S	S	S	S	S	S	S	S	S	S	S	S	S
Polyethylene Seat Frames and Seat Bases	S	S	S	S	S	S	S	S	S	S	S	S	S
Pop Up Cleats	O	O	O	O	O	O	O	O	O	O	O	O	O
Rear Storage	N/A	S	S	S	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	S
Rear Sun Deck	N/A	S	S	S	N/A	N/A	N/A	N/A	S	S	S	S	S
Recessed Driver's Footwell	N/A	S	S	S	S	S	S	S	S	S	N/A	S	S
Removable Rear Access Panel	N/A	S	S	S	S	S	S	S	S	S	S	S	S
Removable Teak Swim Platform	³ N/A	S	S	S	S	S	S	S	S	S	S	N/A	N/A

³ Fiberglass Swim platform

DESCRIPTION	TAN	SUN (95)	SUN (96)	SVLX	ELX (95)	ELX (96)	ECH (95)	ECH (96)	RES (95)	RES (96)	FCS	FCB (95)	FCB (96)
Side Ski Storage	S	S	S	N/A	S	S	S	S	S	S	S	S	S
Silent Rider Muffler System	N/A	O	N/A	N/A	O	N/A	O	N/A	N/A	N/A	O	N/A	N/A
Smoked Glass Stereo Cover	N/A	S	S	S	S	S	S	S	S	S	S	S	S
Stainless Steel Bow Rails	N/A	S	S	N/A	S	S	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Step Pads	S	S	S	S	S	S	S	S	S	S	S	S	S
Stereo Pullout AM/FM Cassette w/4 Marine Speakers	N/A	O	O	O	O	O	O	O	O	O	O	O	O
Stereo Premium JVC Removable Face w/4 Marine Speakers	N/A	O	O	O	O	O	O	O	O	O	O	O	O
"Stereo: Deluxe JVC w/CD Changer, 240 Watt Amp, Subwoofer"	N/A	O	O	O	O	O	O	O	O	O	O	O	O
Storage Under Bow Seats	N/A	S	S	S	S	S	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Surged Carpet Edges	N/A	S	S	S	S	S	S	S	S	S	S	S	S
Tachometer	S	S	S	S	S	S	S	S	S	S	S	S	S
Transferable Lifetime Limited Warranty	⁴ S	S	S	S	S	S	S	S	S	S	S	S	S
Interior Safety Handles	S	S	S	S	S	S	S	S	S	S	S	S	S
Transom Grab Handle	N/A	S	S	S	S	S	S	S	S	S	S	S	S
Triple Fins	S	S	S	S	S	S	S	S	S	S	S	N/A	N/A
Wrap Around Walk-Thru Tempered Safety Glass Windshield	⁵ N/A	S	S	N/A	S	S	S	S	S	S	N/A	N/A	N/A
Wood Grain Dash & Throttle Knob	N/A	N/A	N/A	N/A	O	O	O	O	N/A	N/A	N/A	N/A	N/A

ECH Echelon
ELX Echelon LX
TAN Tantrum

RES Response
RLX ⁶Response LX
FCB Flightcraft Barefooter

SUN Sunsetter
SVLX Sunsetter VLX
FCS Flightcraft Sportster

S Standard
O Optional
N/A Not Available

⁴ Lifetime Limited Warranty

⁵ Contoured Lexan Windshield

⁶ Response is available in on open bow model as an option.

Equipment Descriptions

Removable Teak Swim Platform

A removable teak swim step is located at the stern of the boat to provide easy access into and out of the water for both skiers and swimmers. To remove the swim step, simply remove the pins located on each side of the platform and lift up.

Driver's Seat

The driver's seat may be adjusted by moving the seat forward or backwards while pulling to the left the lever located under the front left of the seat. Once the seat is in place, you may release the lever to secure it.

Adjustments to driver's seats equipped with a lumbar support can be done by the button located on the left underside. To decrease the amount of support, press your back against the seat and press the button. To increase the amount of support, lean forward while pressing the button.

Observer Seat

The observer seat is located in the front of the boat next to the driver's seat. The observer seat is designed to accommodate two or three persons, depending on the model, and faces towards the rear of the boat to allow the observer a clear view of a skier.

Rear Passenger Seats

The passenger seats located in the rear of the boat are designed to comfortably seat three persons. On all models, the bottom of the rear passenger seat can be slid forward and placed on top of the arm supports to provide a sun deck.

Front Passenger Seats

These seats are located in the bow of the boat and can provide comfort for up to three persons. You can lift up and out on the seat cushions to access storage areas located under the seats.

Patented Pivoting Head Tow Pylon

The ski pylon is the solid aluminum post located directly in front of the motor box.

WARNING

Malibu Boats's patented "Swivel-Head" ski pylon is designed for normal waterskiing activities: slalom, jumping, kneeboarding, tricks, and barefooting. Any other uses such as para-sailing, kite flying, towing pyramids of skiers, etc., may overstress the pylon and possibly cause personal injury and/or equipment damage.

Walk-Thru Windshield

This windshield design incorporates a section between the driver and observer seats that can be opened to allow easy access to the bow of the boat. To open, turn the safety latches and push the windshield gently forward. Lay the windshield panel gently back against the rubber stop. Before operating your boat, be sure the window is closed and the safety latches are properly secured.

Tilt Steering Wheel

The tilt steering wheel allows for maximum driver comfort. To adjust the height of the wheel, simply press down on the lever located under the wheel. Move the wheel to the position that is most comfortable for yourself. When the wheel is in the desired position, simply release the lever to lock the wheel into place.

Motor Box

The upholstered motor box reduces engine noise and provides protection for the passengers on board. To open, stand on the port side of the box near the observer seat, grasp the vinyl handle near the floor, and pull open. The motor box is equipped with either one or two gas filled shock absorbers (depending on the model) to provide support for the compartment when opened.

Built-In Locking Glove Box

On most boat models, a built-in locking glove box can be found directly behind the observer's seat.

Battery

The boat's battery is located behind the Observer's seat on all models except the Flightcraft Barefooter. On the Barefooter, the battery will be found in the stern ski locker.

Bow Storage Area

Access to a large storage area located in the bow of all models is accessible by lifting up the bottom of the observer's seat back. The size of this storage area differs between the open and closed bow versions. On all open bow boats, the seat cushions in the bow can be removed to provide additional access. On the Echelon closed bow models, locks are provided to allow for the secure storage of personal items. This lock uses the same key as the one used for the ignition switch.

Gunnel Ski Storage

Conveniently located on both sides of the boat, these storage areas are ideal for the storage of skis, and other items.

Floor Ski Storage

Located on the floor between the driver and observer's seats on open bow models is a panel that when lifted provides access to a large area that can be used primarily for storage of skis. This area can also be used to store beverages if desired.

Bow Eye

The bow eye is located on the front of the boat's hull. Its primary functions include leading the boat off or onto the trailer, securing the boat to the dock, and for securing the boat to the trailer.

Stern Eyes

The stern eyes are located on the top of each side of the transom. The stern eyes are used for securing the boat to the dock and trailer, and for hoisting.

Bow Lights

As required by the U.S. Coast Guard, all Malibu boats are equipped with the proper bow and stern navigational lights. The bow light is located at the tip of the bow near the lifting ring. This light is two colored, red and green, and is used to keep other vessels aware of your presence and course when operating your boat at night.

Stern Lights

A covered two-prong connector can be found on the top of the transom. The stern light is simply plugged into this connector when needed.

Transom Drain Plug

This plug is located in the center of the transom at the bottom and is provided to allow for drainage of the bilge area when needed.

Bilge Drain Plug

A T-handled brass bilge drain plug is located in the engine compartment of all models except for the Flightcraft Barefooter. To access, lift the motor box and look aft of the ski tow pylon and forward of the engine.

WARNING

Be sure that both the transom and bilge drain plugs are securely in place before placing the boat in the water.

Fuel Vent

The fuel vents are located on the starboard deck portion of the transom on all models except the Barefooter. The fuel vents for the Barefooter are located under the front cowling. These vents are designed to allow for the release of gasoline fumes from the fuel tank and bilge area.

Fuel Tank

The fuel tank is located behind the back of the rear passenger seat on all models except the Barefooter and Sunsetter VLX. On the Barefooter, the fuel tank is located in the bow of the boat and the Sunsetter VLX in the center Floor Area. The refilling cap is located on the top portion of the transom on the Barefooter on the front deck.

Speedometer Pickups

The speedometer pickups are located on each side of the boat at the bottom of the transom. The pressure applied to these pickups determines the measured speed of the boat.

Transom Grab Handle & Rear Ski Tow Ring

The stern grab rail is located on the deck of the transom, in the middle. At the center of the grab rail is a hook which can be used to pull skiers if desired.

Molded-In Self Draining Ice Chest

This item is located under the seat cushion of the observer's seat. The ice chest drains into the bilge area.

M.E.M.S. (Malibu Electronic Management System)

This electronic management and monitoring system can be found on the Flightcraft Sportster. See the appropriate section for more information regarding the use of this system.

Computron ATD®

This state-of-the-art computer system is found only on the Echelon models. For more information on the use of this system, see the appropriate section in this manual.

MerCruiser Audio Alarm System

This engine monitoring system can be found on all boat models that are equipped with a MerCruiser engine. This system monitors several key aspects of the operation of the engine and provides for an audible alarm if any of the monitored components require attention. For more information, refer to the engine owner's guide that is provided with your boat.

12-Volt DC Accessory Outlet

This outlet provides power from your boat's battery allowing you to connect accessory equipment such as, cellular phones, video cameras, etc.

Automatic Blower

The Echelon models and the Flightcraft Sportster are equipped with an automatic blower. This blower will automatically turn on and operate from the time the ignition switch is turned on until the engine exceeds 1500 R.P.M.'s. This blower will also automatically operate at anytime during operation where the engine R.P.M.'s go below 1500.

Automatic Bilge Pump

All models are equipped with an automatic bilge pump that will begin to operate at anytime the level of water in the bilge area exceeds 4".

Hot Water Shower

If your boat is equipped with a hot water shower, you should find instructions for its use in the information packet you received with your boat.

Heater

If your boat is equipped with a heater, you should find instructions for its use in the information packet you received with your boat.

Hummingbird Depth Meter (1995) / Lowrance Depth Finder (1996)

If your boat is equipped with this option, you should find instructions for its use in the information packet you received with your boat.

Pop-Up Cleats

Pop-Up cleats are available for all boat models. These cleats will sit flush on the side of the boat's deck when depressed. To pop-up the cleats simply press the screw/button located in the center of the cleat. To depress the cleat simply press the cleat downward until it locks into place.

Fuel Flow Analyzer

The fuel flow analyzer is available as an option on all Echelon models. Refer to the instructions located in the information packet you received with your boat for instructions on the use of this item.

JVC Detachable Face Stereo

If your boat is equipped with this option please refer to the instructions in the information packet.

Pullout Stereo

If your boat is equipped with a pullout stereo, you should have received complete instructions on the use of the stereo in the information packet shipped with your boat.

III. OPERATION AND USE

This section contains important information about the safe operation and use of your new Malibu boat. We urge you to read this entire section of the manual before operating your new boat and recommend that you keep this manual in your boat for future reference.

Fueling

It is very important to take special precautions to avoid spillage while fueling your boat. Gasoline vapors are heavier than air and will develop in the lower cavities of the boat, such as, the bilge.

Below is a list of some guidelines you should follow when fueling your boat:

1. Extinguish all cigarettes, pipes, stoves, and other flame or spark producing items.
2. Make sure all power is off and do not operate any electrical switches.
3. Be sure to wipe off any spillage that may have occurred.
4. Operate the bilge blower for a minimum of four minutes before starting the engine.

Trailer

The information contained in this section on trailering describes procedures used by many boaters. We recommend, however, that you always follow the specific information provided by the manufacturer of your trailer.

Load Carrying Capacity

The certification label attached by the manufacturer on the left forward side of the trailer will show the maximum load carrying capacity of the trailer. The label is required to show the Gross Vehicle Weight Rating (GVWR), which is the load carrying capacity plus the weight of the trailer itself. Be sure that the total weight of your boat, gear, and trailer do not exceed the GVWR.

Consult your trailer dealer for other state regulations concerning brakes, lighting, and other equipment options.

Tie-Downs

Insuring that your boat is held securely in place on the trailer's hull supports, especially when underway, is extremely important. Regardless of your trailer's make or model, there are two key areas to consider:

Bow Tie-Downs A bow stop to hold the front of your boat in place is located on the winch stand. It should be positioned so that the winch line pulls straight and is parallel to the trailer frame. A separate tie-down should then be attached to hold the boat downward and forward. This may be accomplished by a line from the boat's bow eye to an attachment point on the trailer frame or winch stand.

Rear Tie-Downs It is very important to be sure that the transom of your boat is resting fully and securely on the supports provided at the rear end of the trailer, and that it remains in place when parked or underway. Special rear tie-downs are available for this purpose. Check often to be sure the rear tie-downs are securely locked in place and that they are tight enough to prevent any movement of the boat.

Backing the Trailer

Backing the boat trailer may sometimes be a difficult task. It is recommended that you practice backing the trailer in a vacant lot or open area before attempting it in a congested area.

Follow these basic rules when backing:

1. Turn the front car wheels in the opposite direction in which the trailer is to travel.
2. Back car normally once the trailer turn is started.
3. Have your vehicle equipped with a right hand mirror which is required by law when towing.

Launching

If you are an inexperienced boater, the first time you launch your boat can be a very interesting experience. Following are some helpful tips to help you in launching your boat:

1. Before launching, check the type and condition of the ramp. Ramps are usually made of cement but often times are made of asphalt or even sand. When wet, these ramps can get very slick and can cause additional difficulties when launching your boat.
2. Have someone assist you when backing your boat. Back the trailer to the edge of the water and stop. Be sure to properly secure your vehicle.
3. Prepare for placing the boat in the water by removing any tie-down straps, disconnecting tail light connections, and attaching a line to the bow eye fitting. If you are using an outboard, be sure that the outboard unit is in the "up" position. Be sure to re-install the bilge drain plug if it has been removed.
4. To launch, back the trailer into the water to a point where the boat will clear the bottom. Stop and secure the vehicle.
5. Unlock the winch line from the boat. Push the boat into the water and have your assistant guide the boat with the bow line.
6. Once the boat is cleared of the trailer, pull your vehicle out of the water and park it.

Reloading Procedures

To reload, repeat the unloading procedures in reverse. Other important tips to remember are:

1. Try to idle coast on to the trailer, do not power on to the trailer.
2. When pulling the boat on to the trailer, be sure the boat is centered as much as possible. The distance between the boat and runner board should be approximately equal on both sides.
3. Make sure the boat is securely in place before moving the trailer.

Throttle

The throttle lever is located to the right of the driver. When the throttle is vertical, it is in the idle position.

Located at the base of the throttle you will find the shift lock. Pulling outward on this button disengages the transmission thereby allowing for use of the throttle without engaging the transmission. This is needed for starting or warm-up of the engine. Be sure to position the throttle vertically (in idle) before re-engaging the transmission by depressing the button.

When engaging the transmission from idle to either forward or reverse, you must pull up on the safety collar located directly below the throttle lever knob.

For more information regarding the safe operation and maintenance of your boats throttle, refer to the separate instructions located in the information packet shipped with your boat.

Starting

Starting procedures will vary depending on the type and model of engine that has been installed in your Malibu. Consult the engine owner's manual for more specific information regarding starting, operation, and troubleshooting for your particular engine.

Pay close attention to the information regarding the break-in period listed in your engine owner's manual. Top engine performance is dependent upon following the guidelines listed.

Pre-Start Checklist

A routine pre-starting procedure should always be carried out before the first start-up of the day. Below is a list of basic, necessary checks to perform before starting your engine.

1. Check oil and transmission fluid levels.
2. Check fuel supply.
3. Inspect the engine compartment for water or fuel leaks.
4. Operate bilge pump until bilges are dry.
5. Operate blower for a minimum of four minutes to expel fumes.

Starting the Engine

Please refer to your engine owner's manual for the proper starting procedures.

Docking

Docking procedures for the new boat owner usually bring surprising results. Remember, operate your boat at slow speeds to avoid accidents and practice docking to gain experience and confidence.

Once away from the dock, practice docking in open water with an imaginary dock. Pull up to the dock at a slow rate of speed. Shift the boat into neutral and drift slowly toward the dock. Shift the boat into reverse slightly to slow or stop the boat altogether.

Steering

It is important that you get the "feel" of your Malibu boat's steering system. Turn the wheel from full left to full right, and make sure the rudder is turning accordingly. The system should operate freely and smoothly.

IV. INSTRUMENTATION

The following information is broken down into three different sections. The first section discusses the standard gauges that are found on all Malibu Boats. The next section discusses the M.E.M.S. (Malibu Electronic Management System) that is used on the Flightcraft Sportster. The last section discusses the new state-of-the-art Computron ATD (Advanced Technology Dash) that is used on the Echelon models.

Standard Gauges

Tachometer

The tachometer registers the operating speed of the motor's crank shaft in revolutions per minute. This output may be used as an alternative to a speedometer if weight and water conditions permit.

Speedometers

Dual speedometers are provided as a standard feature on all models except the Tantrum (provided as an option). Dual speedometers are provided to improve the reporting accuracy of your water speed in miles per hour. These speedometers are adjustable by turning the knobs on the face of the gauge.

Fuel Gauge

The fuel gauge indicates the quantity of fuel remaining in the tank when the ignition is in the "ON" position. It is recommended that the tank be filled when the gauge indicates 1/4 full.

Oil Pressure Gauge

The oil pressure gauge indicates the oil pressure in the engine while the engine is running. If the oil pressure reading is below the normal range, stop the engine immediately and check the oil level with the dipstick.

Water Temperature Gauge

The temperature gauge indicates the temperature of the engine coolant as it circulates inside the engine.

Voltmeter Gauge

The voltmeter indicates whether the battery is charging or discharging. The needle should be in the normal (approx. 14 volts) range while the engine is running.

Engine Hours Gauge

The engine hours gauge acts as an odometer for the engine. Engine hours should always be noted so maintenance and lubricant changes may be performed at proper intervals.

M.E.M.S. Control System

M.E.M.S. (Malibu Electronic Management System) in the Flightcraft Sportster is Malibu's state-of-the-art dashboard design that uses solid state technology to place eighteen separate monitoring and actuating functions at your fingertips.

M.E.M.S. Control Panel (Figure 1)

This panel is located on the lower left side of your dash console next to the steering wheel. This panel is used to control several different components of your boat.

- Horn** This switch is used to sound the horn.
- Blower** This switch activates the blower for the engine compartment. The function of the blower is to eliminate any fumes in the motor compartment when starting the engine or during operation at cruising speeds.
- Bilge Pump** The bilge pump switch is used to activate the bilge pump so that any excess water in the bilge area may be drained out. You should know that the bilge pump has a sensor in the bilge area and will turn on automatically whenever two inches or more of water is detected.

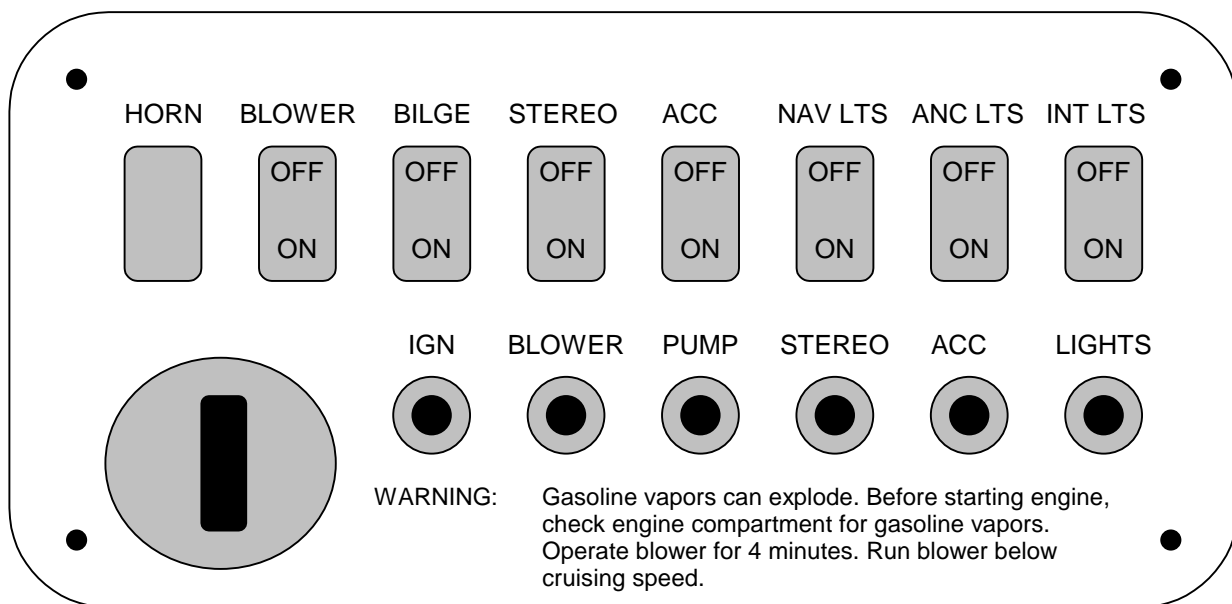


Figure 1 – M.E.M.S. Control Panel

- Stereo** This switch must be on for your stereo to have power. Please see the stereo's owner's manual for operating instructions.
- Accessory** This switch is used to supply power to optional 12-volt accessory receptacle.
- Navigational Lights** This switch activates all of your navigational lighting including the lighting for the dashboard.
- Anchor Light** This switch is used to activate the stern light. Keep this light on after dusk whenever your boat is at rest in the open waterway.

- Interior Lights** This switch is used to activate the interior lights. The interior lights include lights in the gunnels, and storage compartments.
- Ignition Switch** This switch is located at the bottom left of the control panel. Turn the key completely to the right to start the engine.
- Circuit Breakers** Located at the bottom of the control panel directly below the control switches are the circuit breaker switches that are provided for maintenance purposes. Breakers are provided for ignition, blower, bilge pump, stereo, accessories, and navigational lights.

M.E.M.S. Indicator Panel (Figure 2)

This panel is located on the lower left side of your dash console next to the steering wheel. This panel is used to control several different components of your boat.

- Automatic Blower** This light is an indicator that the engine compartment's blower is operating. This light will automatically be illuminated whenever the boat is operating below 1500 R.P.M.'s.
- Low Fuel** This light indicates that you should consider re-fueling your boat. This light will be displayed when your fuel tank is below 15% of capacity.

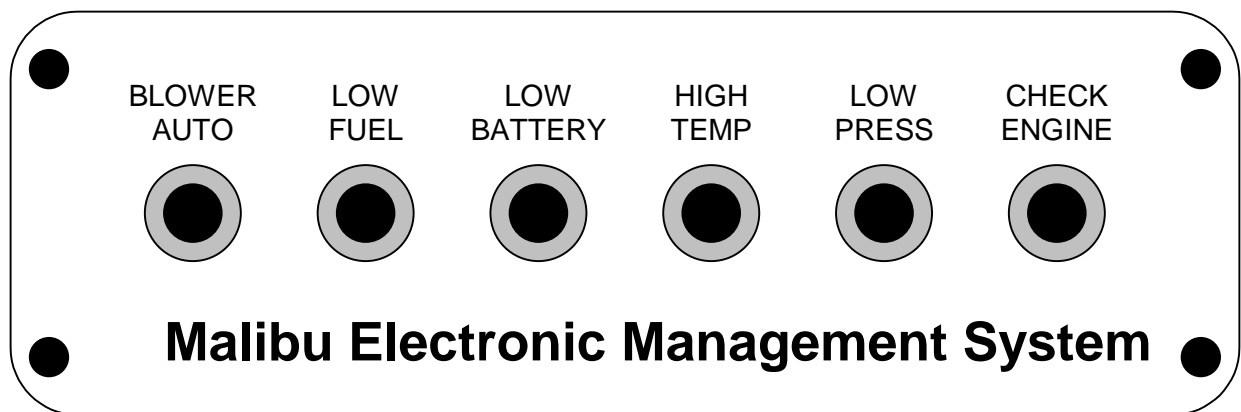


Figure 2 – M.E.M.S. Indicator Panel

- Low Battery** This light indicates that there could be a possible problem with the battery.
- High Water Temperature** This light indicates that a high water temperature condition exists in your engine. Check for leaks or impeller damage.
- Low Oil Pressure** This light indicates that low oil pressure has been detected in the engine. This is a serious condition and should be acted upon immediately.
- Check Engine** This light is activated by a switch supplied by Mercruiser. This light will illuminate and a warning buzzer will sound if there is a low engine oil pressure, high engine coolant temperature, or low transmission fluid pressure.

M.E.M.S. Clock Panel

This panel is located on the right side of the dash directly above the stereo.

- Engine Hours Meter** This meter will help you identify how much your boat is being used and at what time the engine will require servicing. It will run whenever the ignition switch is on.
- 12-Volt Receptacle** This receptacle uses a standard cigarette lighter type adapter and can be used to plug-in cellular phones, video cameras, etc..
- Optional Depth Gauge** An optional depth gauge is available and would be located in the space provided.

Computron ATD® Control System

The elite Echelon models are equipped with an on-board software based computer system. The only one of its kind installed on tournament tow boats. The Computron's user friendly system allows the driver complete control of twelve (12) separate functions that are displayed in digital alpha-numeric format on the dash and actuated by either the steering wheel buttons or on your accessory switch panel located on the dash. The Computron ATD system will also engage an automatic blower when the keyswitch is on and engine RPM's are less than 1500.

The Echelon's tilt steering wheel is equipped with remote function select buttons and a stop watch. The select buttons are infra-red coupled to eliminate any wires or mechanical connections through the steering hub. While it might seem you are sitting in a high tech aircraft cockpit, this unique software based computer makes for the integration of a highly reliable and innovative system.

Computron ATD Control Panel (Figure 3)

This panel is located on the lower left side of your dash console next to the steering wheel, several function switches and controls have been added for its use with the Computron ATD.

- Horn** This switch is used to sound the horn.
- Function Up** This switch is used to change the current function of the Computron ATD system. This switch corresponds to the Function Up switch located on the steering wheel. Refer to the following sections on the use of this switch.
- Function Down** This switch is also used to change the current function of the Computron ATD system and also corresponds to the same switch located on the steering wheel. Refer to the following sections on the use of this switch.
- Alarm** This switch is used to turn off the Computron's audible alarm system. The Computron system has a depth gauge that, when set, will sound an audible alarm to signal that you are in waters that are at or below the minimum depth setting. If you will be operating your boat in shallow waters, you can use this switch to temporarily turn off the alarm.
- Blower** This switch activates the blower for the engine compartment. The primary function of the blower is to eliminate any fumes in the motor compartment when starting the engine or during operation at cruising speeds.
- Bilge Pump** The bilge pump switch is used to activate the bilge pump so that any excess water in the bilge area may be drained out. You should know that the bilge pump has a sensor in the bilge area and will turn on automatically whenever two inches or more of water is detected.
- Stereo** This switch must be on for your stereo to have power. Please see the stereo's owner's manual for operating instructions.
- Accessory** This switch is used to supply power to 12-volt accessory receptacle.
- Navigational Lights** This switch activates all of your navigational lighting.
- Anchor Light** This switch is used to activate the stern light. Keep this light on after dusk whenever your boat is at rest in the open waterway.
- Interior Lights** This switch is used to activate the interior lights. The interior lights include lights in the gunnels, storage compartments, and dashboard.

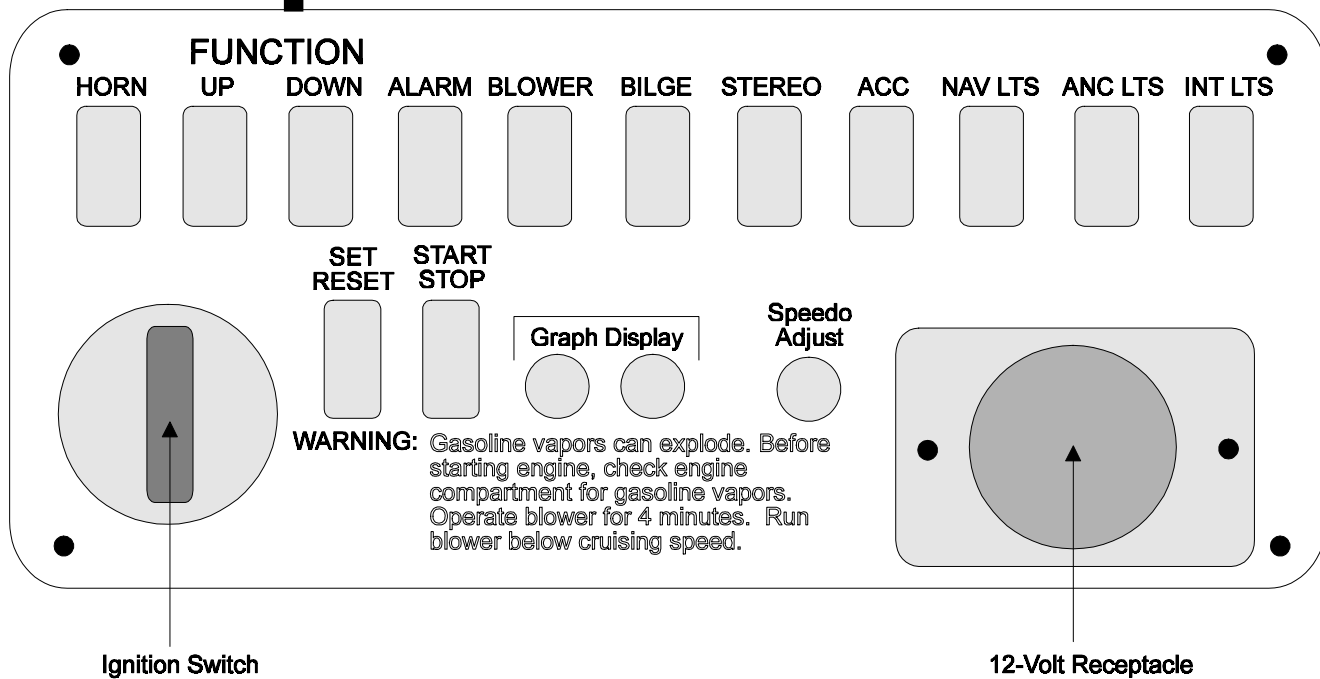
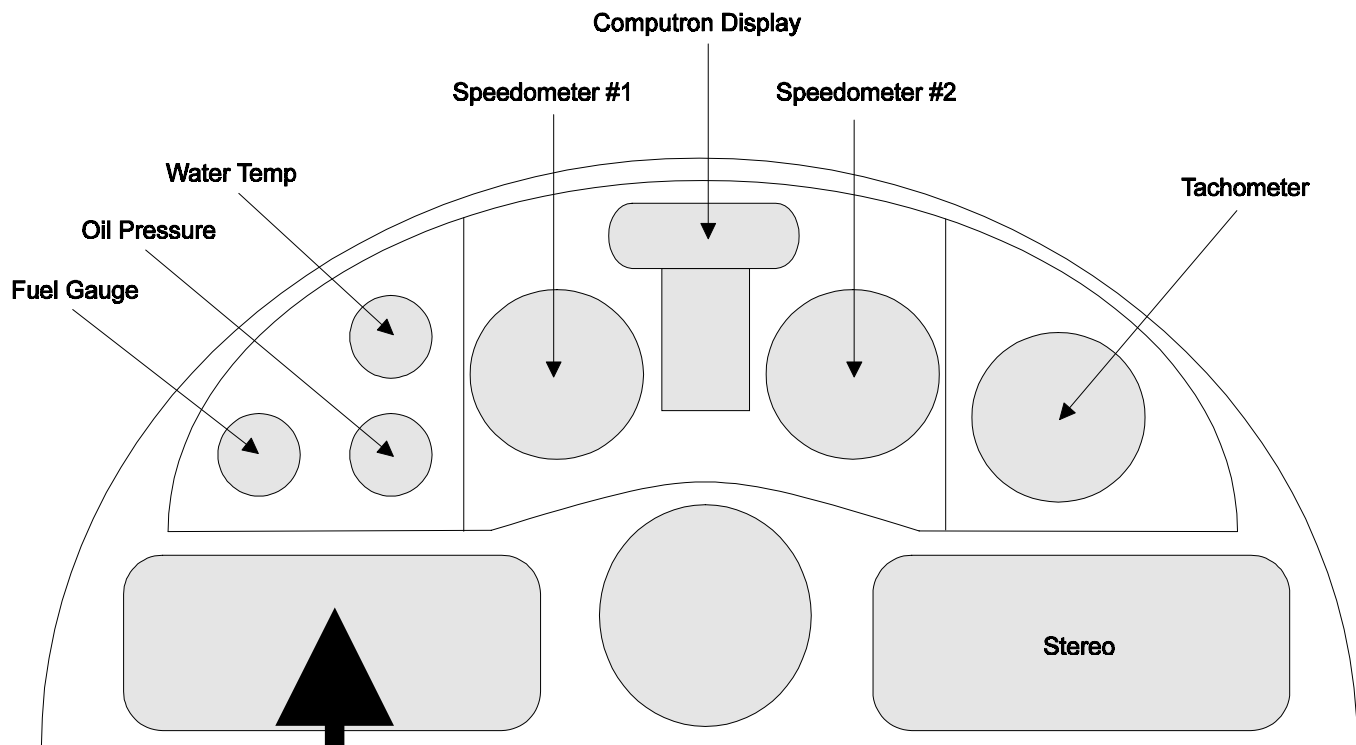


Figure 3 - Echelon Dashboard

Set/Reset Switch	This switch is used to set and reset certain functions with the Computron ATD system. This switch corresponds with the (SR) button located on the steering wheel.
Start/Stop Switch	This switch is used to start and stop certain functions of the Computron system. This switch corresponds with the (SS) button located on the steering wheel.
Graph Brightness Knob	This knob allows the driver to change the brightness of the digital speed analyzer graph display.
Display Brightness Knob	This knob allows the driver to change the brightness of the digital function display located below the graphic speed analyzer graph. In the Computron ATD's "Demo" mode, this knob is used to vary the readings for the digital tachometer and speedometer.
Speedometer Adjustment	This knob allows for the adjustment of the Computron's digital speedometer.
12-Volt Receptacle	This receptacle uses a standard cigarette lighter type adapter and can be used to plug-in cellular phones, video cameras, etc.

Computron Display Module (Figure 3)

This module is located at the top center of the Echelon dash board and is the main display for the Computron ATD system. The display module is broken into two separate sections.

Speed Control Graph	This portion of the Computron display module is used to assist the driver in maintaining desired skiing speeds. This display consists of three green lights in the center surrounded by several red lights. Using the Computron's "Set Speed" function, the driver is able to set a desired speed. If the speed of the boat is the same as the set speed, the green lights will be illuminated. If the speed of the boat is slower than the set speed, the red lights to the left of the green ones will begin to light up. If the speed is faster than set speed the red lights to the right of the green ones will be illuminated.
Function Display	The middle and bottom portions of the Computron display module is used to assist the driver in displaying and setting the Computron's different functions. The following sections will discuss the setting and use of the different functions of the Computron ATD system.

Computron ATD Operation

The Computron ATD system provides several valuable functions that provide additional benefits for enjoyment of your new Malibu Boat. Complete control of the Computron ATD system is performed with the use of only four buttons located on the center panel of the steering wheel.

Function Up	This button is used to scroll forward through the available functions of the Computron ATD system. During the setting of certain functions, it is used to increase the value of a setting.
Function Down	This button is used to scroll backward through the available functions. During the setting of certain functions, this button is used to decrease the value of a setting.
Set/Reset	This button is used during certain operations to set or reset a setting for a particular function.
Start/Stop	This button is only used to start and stop the digital stopwatch function.

NOTE

These four buttons have corresponding switches located on the control panel. The reason for this is that the buttons located on the steering wheel are powered by a 9-volt battery located in the steering wheel's front panel directly behind the buttons. These separate switches are provided in the event the battery should lose power during a competition.

Available Functions

The Computron ATD system provides the driver with complete control over 12 separate functions. The Computron ATD's functions include the following in order of display mode:

- | | |
|------------------------|--|
| Banner | This function causes the Computron system to display the text "CUSTOM BUILT FOR YOUR NAME" when power to the boat is provided. You can change the display of "YOUR NAME" to any 12 digit alpha-numeric characters. To do so, press and <u>HOLD</u> the (SS) button while the banner is displayed. The Computron system will acknowledge that you wish to change the display by displaying "LET GO". At this time simply release the (SS) button. This will place the Computron system in "Edit" mode. Once in the "Edit" mode, press the (F↑) to scroll the display forward from A to Z, 0 to 9, and then a blank space. Press the (F↓) button to scroll the display backward from a blank space, 9 to 0, and then A to Z. Pressing the (SR) button will move to the next character in the display to allow editing. Pressing the (SS) button will save your changes and exit the "Edit" mode. Pressing the Alarm Off switch will discard your changes and exit "Edit" mode. To reset the display to "YOUR NAME" simply press and hold both the (SR) and (F↑) buttons while turning the ignition switch from the "Off" position to the "Accessory" position. The Computron system will acknowledge that you wish to change the display to "YOUR NAME" by displaying "LET GO". |
| Depth Meter | This function provides a digital readout of the water's current depth. |
| Sea Temperature | This function provides a digital display of the temperature of the water surrounding your boat. |
| Air Temperature | This function provides a display of the temperature of the air. |
| Digital Clock | This function provides a display of the current time. To set the clock, press the (SR) button. The display will begin to blink. Once it is blinking, use the (F↑) button to change the hours and press the (F↓) button to change the minutes. Once time is set correctly, press the (SR) button to save your changes. The display will then stop blinking and the clock has been set. |
| Voltmeter | This function displays a digital readout of the battery's voltage. The voltmeter indicates whether the battery is charging or discharging. The display should read approximately fourteen volts while the engine is running. |
| Engine Hours | The engine hours display acts as an odometer for the engine. Engine hours should always be noted so maintenance an lubricant changes may be performed at proper intervals. |
| Trip Log | This function displays and allows the reset of the Computron's mileage trip log. To reset the trip log, press the (SR) button. |

Set Depth Alarm This function allows for the setting of the Computron ATD's depth alarm. This function is used to enable an audible alarm that will sound if your boat has ventured into waters that are at or below the depth that has been set. To change the depth alarm, press the **(SR)** button to enter edit mode. The display will begin to blink. Use the **(F↑)** and **(F↓)** buttons to change the desired depth. You may enter a range between 3' and 20'. A setting of "- - -" will disable the alarm altogether. When finished, press the **(SR)** button to save your changes.

NOTE: An "Alarm" on/off switch is located on the Echelon's control panel. This switch provides you with the ability to temporarily disable the audible alarm for the depth meter if you will be operating your boat in shallow waters for a short period of time.

Tachometer This function will display a digital readout of the engines current R.P.M.'s.

Set Speed This function provides the driver with the ability to set a desired speed for the boat. This function works in conjunction with the graphic speed analyzer display discussed earlier. To change the desired speed setting, press the **(SR)** button. The display will begin to blink. Use the **(F↑)** and **(F↓)** buttons to change the desired speed setting. When finished, press the **(SR)** button to save your changes.

Speedometer This function will present a digital readout of the boat's current speed. Adjustment of the speed can be performed using the adjustment knob located on the control panel.

Stop Watch This function provides competition level skiers with a ten segment digital stopwatch. To use the stopwatch function, press the **(SR)** button to reset the stopwatch to zero. When ready, press the **(SS)** button to begin the timer on the first segment. Press the **(SS)** again to start timing the second segment. You can time up to ten segments by pressing the **(SS)** button for each segment. Pressing the **(SR)** button will stop timing the tenth segment and will place the stop watch in "Review" mode. While in "Review" mode, pressing the **(F↑)** and **(F↓)** buttons will allow you to scroll through each of the ten segments. Note that the stop watch will continue to operate at all times while viewing or changing other functions and can be stopped at any time by pressing the **(SS)** button. However, the stopwatch can only be reset to zero when in the stopwatch function.

Demo Mode This function is provided to allow dealers and owners to demonstrate the functions of the Computron ATD system while the boat is out of the water. To start the "Demo" mode, simply press and hold the **(F↑)** and **(F↓)** switches on the Ignition Control Panel while turning the ignition switch from the "Off" position to the "Accessory" position. Please note that the **(F↑)** and **(F↓)** buttons on the steering wheel panel cannot be used to place the Computron system into the "Demo" mode. The Computron display will acknowledge that you want to enter the demo mode by displaying "LET GO". At this time simply release the **(F↑)** and **(F↓)** buttons. All functions on the Computron ATD system are available with the following exceptions:

- 1) The depth meter is fixed at 15 Feet.
- 2) The tachometer display can be varied from between 700 and 6000 RPM by turning the "Display Brightness Knob" on the Ignition Control Panel.
- 3) The Speedometer display can be varied from 8 to 50 MPH by turning the "Display Brightness Knob" on the Ignition Control Panel.

To exit the demo mode simply turn off the ignition switch. When you turn the system on again, it will be in the normal operation mode.

CAUTION: DO NOT USE THE DEMO MODE WHILE THE ENGINE IS RUNNING.

V.CARE & MAINTENANCE

This section deals with the care and maintenance of your new Malibu boat. Following the material discussed in this section will protect the investment you have made by preserving the beauty and performance of your new boat for years to come.

General

Propellers

Even slight propeller damage can mean the loss of one MPH. Greater damage can mean considerably more speed loss. Worse yet, damage usually is not done to each blade uniformly and, therefore, sets up imbalance vibrations that can cause fatigue damage to other parts of the engine or drive system.

At least once a year, more often if you use your boat extensively, you should have your local Malibu dealer inspect the propeller for any possible damage.

At least once a month if you use your boat regularly, you should check and tighten the prop nut.

Shaft Packing

Located in the bilge under the rear center access panel, is the shaft packing. The shaft packing is a seal where the prop shaft goes through the hull of the boat. This seal should be checked and tightened periodically. Please note that it is normal for a small amount of leakage to occur from this seal. It should leak at about the rate of one drop every ten seconds.

Bilge

The bilge of your boat can accumulate oil and greasy dirt over a period of time and should be cleaned out periodically. Usually, ordinary soap and water does not remove the accumulation, and something stronger will be needed. Check with your Malibu dealer for their recommendation.

Hoses

Fuel lines, vent hoses, and drain hoses should be checked frequently for leaks. If this is occurring around the fitting, then tightening of the hose clamps may be all that is necessary. However, if the leak continues, replace the hose immediately to prevent a build-up of fluids or gases. Surface cracking on hoses indicates wear, and replacement is recommended. Use fuel system parts certified for marine use only. **Do not substitute automotive parts.**

Windows and Windshields

The windows and windshields on your Malibu boat are made of tempered safety glass and are similar to the windows in your car. The glass will scratch, however, and abrasive cleaner should not be used to clean your windows. Soap and water or automotive glass cleaners may be used. Windshields' on Tantrums are fitted with Lexan and are very durable but can scratch easy with most cleaners. For the best cleaner consult your dealer.

Electrical

Your Malibu boat is equipped with a standard 12-volt battery. The battery comes with a non-metallic box to help contain spills and prevent corrosion.

Check your battery terminals frequently for corrosion and tightness. Clean terminals with a baking soda and water solution and a wire brush. Also, check the fluid levels in the cells. Usually, a level approximately 1/4 to 1/2 inch above the plates is sufficient. If needed, fill with distilled water. However, some batteries are sealed, and this process is not necessary. Also, read directions when applicable.

WARNING

Malibu does not recommend starting your engine with jumper cables under any circumstances. Risk of spark at the battery post igniting gasoline fumes or hydrogen gas from the battery is too great.

Engine Care

For information on engine service and maintenance, please refer to your engine owner's manual. The maintenance schedule included in this manual outlines safety checks, lubrication, and general service, that should be performed at regular intervals. It is recommended that any engine replacement parts used for maintenance or repair be supplied by an authorized Malibu dealer.

Rudder Stuffing Box

The rudder stuffing box has a grease nipple and should be checked and lubricated annually. The rudder stuffing box is accessed through the rear center access panel. Use only a waterproof grease.

Winterizing

When the boating and ski season comes to an end, it is recommended that the boat be removed from the water and stored. It is extremely important that proper winterizing procedures are read and followed to ensure longer boat life. Here is our list of suggestions to keep your boat in top condition:

1. Prepare the engine according to the instructions found in your engine owner's manual.
2. Clean and dry the boat's interior and exterior thoroughly.
3. Inspect boat hull for residue and remove any if present.
4. Clean the bilge area thoroughly and operate the bilge pump to remove any water from bilge lines.
5. Remove all seat cushions and open all storage areas. Store the seat cushions in a cool and dry place.
6. Cover the boat and store it in a garage or other protected facility.
7. If the boat is stored on a trailer, you should block the trailer wheels.

Exterior

Your Malibu boat is highly resistant to weathering, water pollution, and minor scrapes which occur during normal use. However, regular care and maintenance of your boat is a general responsibility for all Malibu boat owners. By following the boat care instructions listed below, you will be able to extend the life and beauty of your Malibu boat.

Fiberglass and Gelcoat

The fiberglass hull and deck of your Malibu boat consist of a molded shell and exterior gelcoat. The gelcoat protects the fiberglass shell and gives all Malibu boats a smooth and shiny surface. The following are some general instructions which will help you maintain your boat's sleek appearance:

1. Wash monthly or more frequently, depending on use. Use a mild dishwashing soap and wash in lukewarm or cold water. Rinse your boat with fresh water and wipe down immediately to avoid water spots.

WARNING

Never use harsh soaps, porcelain cleaning powders, detergents containing ammonia or chlorine, acetone, or ketone solvents.

2. Wax the boat hull and deck after every three or four outings to decrease water friction and to lessen the potential for staining or spotting to the gelcoat surface. In cases where the original gelcoat shine cannot be restored by waxing, hand buff the surface using any commercial compound. Be sure to apply several coats of wax over the area that has been polished.

Surface Stains

Stains can appear as a result of dust, road tar, plant sap, rust from metal fittings, and other materials coming in contact with your boat's exterior. Listed below is a step-by-step procedure to remove stains from your boat:

1. Wash area with dishwashing soap.
2. Apply a mild cleanser on a small area (3' by 3').
3. Rinse with fresh water.
4. Buff with a fine rubbing compound.
5. Wax.

If the stain is not removed by the dishwashing soap or mild cleanser, then the next procedure is to use either denatured or rubbing alcohol. Common rubbing alcohol is excellent for removing stains.

WARNING

Do not use acetone, ketone, or other solvents to remove stains. These chemicals are flammable and may also cause damage to the gelcoat.

Scratches

Scratches to the gelcoat sometimes occur during normal use. Your dealer can usually restore the gelcoat to like-new condition.

Underwater Corrosion

Corrosion occurs in saltwater conditions from the interaction of the saltwater and the direct current of the battery. To prevent corrosion, it is important to keep the bilge area as dry and clean as possible.

Care For Boats That Are Moored

Due to gelcoat discoloration, osmosis (blistering), and algae growth, it is not recommended that you leave your boat moored for long periods of time. If your boat will be moored in fresh water or saltwater for extended periods of time, you should do the following:

1. Haul-out and clean your boat regularly (every 14-21 days). Use soap, water, and plenty of elbow grease.
2. Apply wax after cleaning.

You should also check with your local Malibu dealer about anti-fouling paint and other products that can be applied to the hull bottom below the water line.

Interior

Upholstery

All upholstery items aboard your boat are made of a tough marine vinyl that is easily cleaned with a mild detergent and warm water. After washing the vinyl, be sure to dry thoroughly.

WARNING

Do not use harsh cleaners or silicone based products. Products of this type will shorten the life of the vinyl.

Our materials are mildew resistant, but there are no products available to us that are mildew proof. Therefore, we also recommend that you dry the upholstery thoroughly at the end of each day's boating activity to prevent mildew which will rot the upholstery threads and backing. Also, when done with your boat, tip up all seat base cushions on edge to allow any accumulated water to drain.

NOTE

Mildew damage is not covered under your warranty.

Carpet

Your Malibu boat is equipped with a top quality, all-weather indoor/outdoor carpet. It is essentially waterproof and fade resistant. Occasional vacuuming, and scrubbing with soap and water, will remove embedded dirt and grit.

Hardware

Most of the metal hardware on your boat consists of brass, stainless steel, or aluminum and should be cleaned on a periodic basis with soap and water. In fresh water, metal fittings and hardware should be sprayed annually with a rust inhibitor such as WD-40, and every two or three months in saltwater.

Teak

Teak wood should never be varnished, instead, teak or mineral oil should be used. Oil treatments should be applied at least four times a year.

APPENDIX A

WARRANTY INFORMATION

Malibu Boats Transferrable Lifetime Limited Warranty

Malibu Boats West, Inc. warrants to the Original Retail Purchaser that the hull, deck, liner, upholstery frames, and stringers on every new boat manufactured shall be free from structural defects for as long as the original purchaser owns the boat. Malibu Boats West, Inc. or its selling dealer will, without charge, repair or replace at Malibu's option, any boat or portion thereof proven to its satisfaction to be in defect during the above warranty period. Warranty repairs will be done at the selling dealer's locations or the manufacturers location provided that transportation costs for both directions are prepaid and the claim is made within sixty (60) days after the defect is discovered.

Two Year Transferrable Option:

This policy may be transferred (for a minimal fee) to subsequent purchasers during a period of two years from the date of delivery to the original retail purchaser. This warranty does not cover the gelcoat nor any other components fastened or applied to the dash. Gelcoat discoloration, blisters, and cracks are not considered structural defects. **(Tantrum Warranty is not transferable.)**

This warranty does not apply to the following:

1. Any product not manufactured by Malibu Boats West, Inc., including but not limited to engines, drive trains, transmissions, steering systems, instruments, fuel tanks, pumps, underwater gear, propellers, controls or other equipment or accessories installed by Malibu Boats. To the extent that these parts are warranted, Malibu Boats will, if possible, furnish the manufacturer's warranty documents to the original owner.
2. Damage or effects of such damage caused by the installation of engines, accessories, or other equipment installed by anyone other than Malibu Boats.
3. Boats that have been sold or transferred by the original owner outside of the two year transferrable option period; boats that have been altered, overpowered, overloaded, or subject to misuse or negligent care.
4. Windshield breakage, upholstery colorfastness or mildew damage, paints, plated finishes, gelcoat discoloration or osmosis, and finish distortions.

Note: Water can be a very harsh chemical (depending on the alkali, chemical, or iron condition present) and even though we use the best gelcoat available, blisters may still occur on submerged hull surfaces. If your boat is left in the water for more than 2-3 weeks we suggest you apply a good bottom paint to protect the hull from osmosis and blisters. You may also remove your boat from the water and allow to thoroughly dry every 1-2 weeks to help prevent this condition. **Gelcoat blisters and osmosis are not covered under your Malibu Warranty.**

5. Boats used for racing or any type of commercial use or service.
6. Costs or charges derived from inconveniences of loss of use, commercial or monetary loss due to time loss, or any other special or consequential loss of any kind.

To validate this warranty, it is the responsibility of the original Retail Purchaser to complete and return a warranty registration card within 10 days of the retail purchase date to:

Malibu Boats West, Inc., 1861 Grogan Avenue, Merced, CA 95340

Notification of a claim or defect can be made through the selling dealer or by writing directly to Malibu Boats. Information needed for processing a claim includes: name and address of original retail purchaser, boat serial number (embossed on the upper right side of the transom), original retail purchase date, a detailed explanation of the defect and a estimated repair cost. Warranty repair or replacement can only be made after the above information is approved by Malibu Boats. If approved, a warranty authorization number will be issued in writing or by telephone to the approved warranty repair station.

This limited warranty is given in place of and instead of any and all express or implied warranties, and may not be modified in whole or in part by anyone other than Malibu Boats.

Some states do not allow a limitation on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages; therefore, these limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

Malibu Boats West, Inc., 1861 Grogan Ave., Merced, CA 95340
Phone: (209) 383-7469, Fax: (209) 383-0499.

Effective: 1994 Boat Models.

Other Manufacturer Warranties

Along with Malibu's warranty policy, many of the components used to build your Malibu boat are covered by individual warranties from their respective manufacturers. These products all have specific warranty periods and conditions that you should be familiar with should you need assistance. Included in the information packet shipped with your boat you will find information regarding any individual manufacturer's warranty policies for the different equipment installed on your boat. We strongly advise you to make yourself familiar with the different warranties offered before contacting the vendor.

Appendix B

Owner Service Assistance

Problem Resolution

Everyone associated with Malibu Boats is highly concerned with your complete and total satisfaction. Included in this concern is the prompt resolution of any problems that may occur during the life of your Malibu boat. Under almost all conditions, most problems can be adequately resolved by your local Malibu dealer. However, if a problem arises and cannot be handled by your dealer or for which the solution is unsatisfactory to the owner, feel free to contact us here at the factory. When contacting us, please be ready to provide a detailed description of the problem and what steps have been taken to resolve the issue. Be sure to have any appropriate documentation ready if it should be needed. Our factory representative will investigate the situation and will dictate the appropriate response should further action be needed to resolve the problem.

Local Repair Service

If the need for service should ever arise, the best place to take your boat is your local authorized Malibu Boat dealer. They have the knowledge, technical staff, and equipment needed to properly service your boat.

Service Away From Home

If you are away from home and require service to your boat, contact your nearest authorized Malibu dealer. Check the yellow pages of the telephone directory in the area. If you are unable to locate an authorized dealer in the area, contact us here at the factory. We will be happy to give you the name and number of a dealer in the area.

Parts and Accessories

To order replacement parts and accessories for your Malibu boat, contact your local authorized Malibu dealer. The dealer has the necessary information to order parts and accessories for your boat if they do not have them in stock.

Appendix C - Identification Information

The following form should be used by you to record certain important information about your new Malibu boat. This information will come in handy when having your boat serviced or if warranty repairs are required.

OWNER'S NAME: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

HULL ID #: _____

MAKE AND MODEL _____

ENGINE MAKE & MODEL: _____

ENGINE SERIAL NUMBER: _____

PROPELLER TYPE & SIZE: _____

SELLING DEALER: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

DATE PURCHASED: _____

WEIGHT: _____

LENGTH: _____

BEAM: _____

DRAFT: _____

TRAILER MAKE & MODEL: _____

TRAILER SERIAL NUMBER: _____

INSURANCE COMPANY: _____

POLICY NUMBER: _____

APPENDIX VII.GLOSSARY

AFT:	To the rear of the boat near the stern. Generally used to give directions.
BEAM:	The widest portion of the hull.
BILGE:	The lowest portion inside the boat. This is generally the section directly below the engine compartment.
BOW:	The forward portion of the boat.
BULKHEAD:	Vertical portion in a boat.
CHINE:	The intersection of the sides and bottom of a "V" bottom boat.
DEADRISE:	The degree of angle from the keel to the chine.
DECK:	Upper structure which covers the hull.
DRAFT:	Vertical distance from the waterline of the boat to the lowest part of the boat.
FibECS / FibECS II:	An engine mounting method using fiberglass instead of aluminum, patented by Malibu Boats West, Inc., that provides for major reductions in noise and vibration found on all other inboard boats.
FIBERGLASS:	Fibers similar to wool or cotton, but made from fibrous glass. Glass fiber forms include cloth, yarn, mat, milled fibers, chopped strands, roving, and woven roving.
GELCOAT:	A surface, either colored or clear, providing a cosmetic enhancement and exposure improvements to a fiberglass laminate.
GUNNEL:	The upper edge of a boat's side.
HULL:	The bottom section of the boat.
KEEL:	The lowest most portion of the bottom of the boat.
LIFTING STRAKES:	Strips molded or attached to the surface of a hull designed to create lift as speed and pressure increase with the static water.
PORT:	To the left side of the boat.
STARBOARD:	To the right side of the boat.
STERN:	To the rear of the boat.
STRINGER:	Longitudinal members that are fastened inside the hull of the boat which provide structural integrity.
TRANSOM:	The area forming the stern, or rear, of a boat.
WAKE:	The track or path a boat leaves behind while in motion.

